Design Specification for QuickReply

QUICKREPLY

The QuickReply application is used to process e-mail responses to mailing campaigns. The building and sending of the e-mail messages is not within the scope of QuickReply.

The test within a campaign's flight provides the outbound e-mail message. The message will contain both generic and personalized information and will normally require a response from the person the message is sent to.

Responses to a test are received in the Inbox folder of the mailbox. The design objective of QuickReply is to read the responses from the Inbox, and decide from its content the requirements of the response. On determining (or not determining) the requirement, the response is filed to pre-configured sub-folders and the appropriate tracking database is up-dated.

QuickReply will generate diagnostic information that will support the reasoning on how it reached its decision.

The main data storage area of QuickReply is Microsoft Access relational database. Appropriate records will be added to this database as the response processing is performed. In addition, it is likely there will be responses that cannot be automatically processed and, in such cases, Customer Service will use QuickReply in manual mode. Manual mode will also add records to the appropriate tables in the database.

The information in the database will be used to generate reports.

MAILBOX ORGANIZATION

Mailings are performed on behalf of a Client. Consequently, all e-mail transfers for a particular Client will be performed within the Clients mailbox.

The organization of the Clients mailbox includes an Inbox for the responses and a pre-configured number of sub-folders where the responses are filed.

Mailbox - <Client Reference e.g., HBSP)

Campaign CID

Flight FID

AC

YYMMDDhh

AddChange

YYMMDDhh

BouncesHard

YYMMDDhh

BouncesSoft

YYMMDDhh

Master

Order

YYMMDDhh

Unclear

YYMMDDhh

Unsubscribe

YYMMDDhh

Inbox

YYMMDDhh

In the above, YYMMDDhh is a directory named after the year, month, day and hour. This format reflects the date and time the entries were placed in that folder.

Each test flight will have a number of responses associated with it. When QuickReply categorizes a response, it will be automatically moved from the Inbox to the appropriate sub-folder.

- **AC** Responses for customer service to process manually
- **AddChange** Responses that contain personal detail changes
- **BouncesHard** Hard bounces
- **BouncesSoft** Soft bounces
- **Master** Master version of the outbound mail
- **Order** Responses with an order
- **Unclear** Responses that are unclear as to how they should be processed
- **Unsubscribe** Response to unsubscribe

E-MAIL STYLES

The Style ID (SID) of a response indicates the approach that should be taken by QuickReply during processing.

The SID is a two-digit numerical value

XY

where:

- X=1 indicates the outbound Personal block is included in the outbound message.
- Y=message layout style described below.

The following two layout styles are supported:

a) Single Product Offer – layout style=1
This style offers one product. The respondent is asked to reply "YES" if they are interested.

b) Multi-Product Offer – layout style=2
The mailing information is based on information in a relational database. This style offers a number of products the respondent can choose from. For example, the outbound message could contain:

```
Your choices (detailed below) are:

A:     The work of Leadership Audio
B:     Leading Your People Audio
C:     Leading Change Successfully Audio
D:     Overcoming Resistance to Change Audio
E:     Gaining Competitive Advantage Audio
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The respondent makes a choice and responds by stating their requirement in the free format e.g., "please send me ABE".

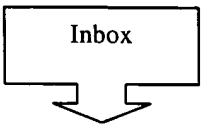
The number of items can vary as well as the choice symbol i.e., 1,2,3, could be used instead of A,B,C.

PROCESSING INBOUND MAIL AND REPORTING

The general processing and reporting function is described below. The general flow in processing responses is to determine the membership ID (MID), then the test ID (TID) and style ID (SID) and then perform an examination of the response to determine the requirement.

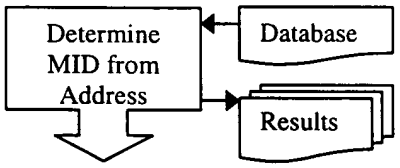
The processing criteria can be summarized as follows:
ci) who is the Respondent?
cii) what is the response to?
ciii) what does the Respondent require?

All inbound responses are targeted to the Inbox of the Client's Mailbox. On a periodic basis, the responses in the Inbox will be processed.

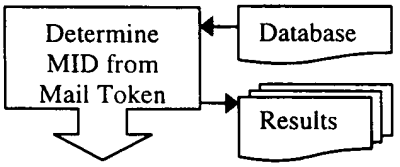


ci) Who is the respondent? – Determine the MID
The are several ways in which the Membership Information can be determined. The importance of the MID is that could provide a handle to the Members personal information

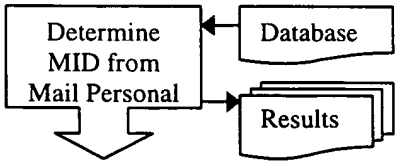
a) Extract the Response Address from the response. Determine if a unique record exists for the Address. If a unique address exists then the MID is determined. If the record is not unique then examine the mail token.



b) If the Mail Token exists then the MID is determined. Use the MID to confirm that the respondents e-mail address is the same as that in the database. If the addresses are different then report that this was the case but continue to process.



c) If the SID indicates that the Personal block was included in the outbound, the extract the Member details from the Mail Personal. The extraction assumes that the response information is in square brackets '[]'. The field definitions are defined in the database together with an indication of those that have to be completed by the responder. If Mail Personal is not complete (the fields are indicated in the database), move the response to Unclear and report.

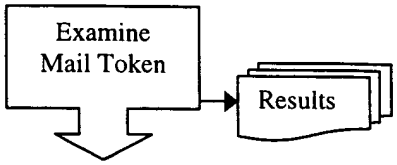


d) If the MID cannot be determined, move the response to Unclear and report.

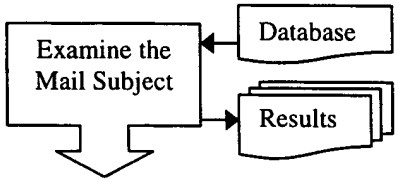
cii) What is the response to? – Determine the TID and SID

The next stage in response processing is to determine what the response is to. This can be determined from the Test ID.

a) If the Mail Token exists then extract the TID and SID. If the Mail token is absent, report but continue the determination of the TID.



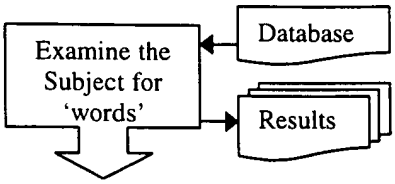
b) Determine the TID from the database based on the Mail Subject of the response. If the look-up is successful, then the SID will also be determined.



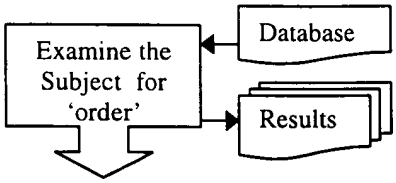
c) At this stage the TID and SID should be known. If not, move the response to Unclear and report.

ciii) What does the Respondent require?
With the MID, TID and SID determined, the response message(s) are still of no value until it is established what the respondent requires. The obvious approach to this problem is to compare the response with the original and try to make some sense of the differences.

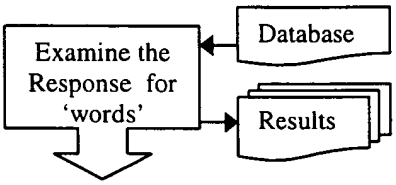
a) If the Mail Subject did not contain the Subject Token, examine for words that appear in the word action table. Any bounced responses are moved to the Bounce sub-folders. Any unsubscribe requests are moved to the Unsub sub-folder.



b) If the SID indicates a single item promotion, examine the Mail Subject for words that appear in the word action table. Any order responses are moved to the Orders sub-folders.

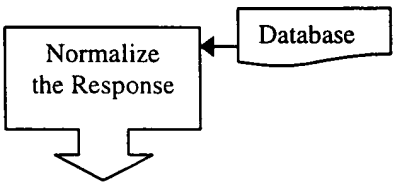


c) Examine the response for words that appear in the word action table. Any bounced responses are moved to the Bounce sub-folders. Any unsubscribe requests are moved to the Unsub sub-folder.

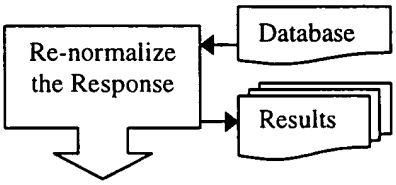


d) Remove all the text of the outbound message from the response.

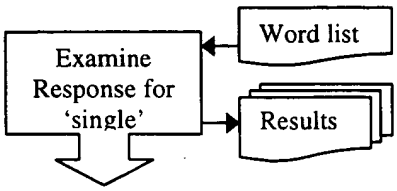
e) Normalize the response. Remove characters from the beginning of each line. The list of characters to be removed are in the word replacement table with ModeID=LineStart.



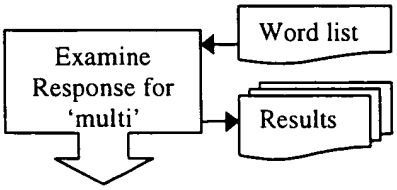
f) Replace phases from the normalized response. The phases that are replaced are given in the word replacement table with ModeID=PhaseReplace.



g) If the SID indicates that there is only a single item on promotion, examine the normalized response for words that indicate an order of a single product item. The words are in the word action table with the ActionID=SingleOrder. If order



h) If the SID indicates that there are multi-items on promotion, examine the normalized response for phrases that indicate an order of multi-items. The words are in the word action table with the ActionID=MultiOrder. In the case of multi-products, the



information the StartOption and EndOption from the bindings table are used to verify that item(s) ordered are in the correct choice range.

i) Any order requests are moved to the Orders sub-folder.

j) If the purpose of the response cannot be determined, then move the response to the Unclear sub-folder.

DATABASE ORGANIZATION

QuickReply uses two types of databases that are stored in Microsoft Access. The first database is part of the QuickReply application and contains high-level information on the campaigns, flights and tests. The second database is specific to a particular Client Test.

a) QuickReply Database

The QuickReply database contains the information that binds campaigns, flights and tests.

tblTestBindings	**- contain Test bindings**
Test ID	**unique**
Client ID	
Client Test Database	database name used for the test information
Subject	subject text of the outbound test
Style ID	the style of the outbound message
StartOption	character of the first item in the test
EndOption	character of the last item in the test
Campaign ID	
Mailing ID	
Flight ID	

tblOutboundPersonal	**- contains personal details that appear in a test**
Test ID	**unique**
Question	prompt displayed in personal block e.g., First Name
AnswerLen	the maximum length of the answer
AnswerReq?	flag to indicate that an answer must be given

tblWordActions	**- contains words that convey an action**
Word	**unique**
Action ID	action id for this word e.g., 'bounce'

tblWordReplacement	**- contains phrases and their replacement**
Phase	**unique**
Replacement	replacement to the phrase
Mode ID	type of replacement

b) Client Test Database

tblMembers	**- contains member details**
Member ID	**unique**
Email	
Prefix	
First	
Middle	

Last	
Suffix	
Title	
Company	
BillAddress1	ShipAddress1
BillAddress2	ShipAddress2
BillAddress3	ShipAddress3
BillCity	ShipCity
BillState	ShipState
BillZip	ShipZip
BillCountry	ShipCountry
Tel	
Ext	
Fax	